



OPERATIONAL MANEUVER-From the American Civil War to the OMG: What are its origins and will it work today?



by

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In essence, operational maneuver is an exciting concept with theoretical support and historical validity. The first real use of continuously successful operational maneuver was probably the "strategic cavalry raid" developed during the American Civil War. Today's OMG (Soviet) and deep attack AirLand Battle force (U.S.) are logical, evolutionary outgrowths of the operational maneuver successes of recent wars. It should therefore not be too surprising to learn that today's operational maneuver doctrine is similar on both sides, having at least partially evolved from a common sourse. Executing the doctrine, however, while appealing and supportable theoretically and historically, will be exceptionally difficult and fraught with pitfalls.

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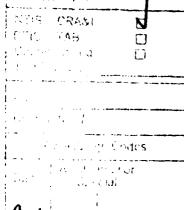
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### **ABSTRACT**

OPERATIONAL MANEUVER - FROM THE AMERICAN CIVIL WAR TO THE OMG; WHAT ARE ITS ORIGINS AND WILL IT WORK TODAY? by LTC James G. Snodgrass, USA,41 pages.

States Army, many operational level terms are in vogue and being studied in great detail. <u>FM100-5</u> imparts doctrinal wisdom regarding campaign planning, the concepts of center of gravity and culminating point and lines of operation, and AirLand Battle tenets and imperatives — all great stuff! Many experts have noted that the 1982 and 1986 versions of <u>FM100-5</u> have put *maneuver* back into our doctrine, after its having been supposedly subordinated to an attrition-based *firepower* doctrine since World War II.

This monograph is an effort to take a longer look at maneuver — and specifically maneuver at the operational level. First, a review of doctrinal literature is made to define fully operational maneuver. Secondly, today's ultimate operational maneuver concept — the Soviet Operational Maneuver Group (OMG) — is described in concept and theory, and then traced to its origins not only in Soviet-Russian-Asian history but indirectly to the "strategic raids" by the Confederate and Union cavalry of the American Civil War. Finally, after discovering that most U.S. operational maneuver concepts are essentially identical to Soviet operational maneuver concepts, the paper asks the question whether or not this theoretical concept will work in a modern European scenario — as executed by the Soviet OMG or a U.S. deep attack force. (Source)

In essence, operational maneuver is an exciting concept with theoretical support and historical validity. The first real use of continuously successful operational maneuver was probably the "strategic cavalry raid" developed during the American Civil War. Today's OMG (Soviet) and deep attack AirLand Battle force (U.S.) are logical, evolutionary outgrowths of the operational maneuver successes of recent wars. It should therefore not be too surprising to learn that today's operational maneuver doctrine is similar on both sides, having at least partially evolved from a common source. Executing the doctrine, however, while appealing and supportable theoretically and historically, will be exceptionally difficult and fraught with pitfalls.

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#### PART I

"Military men who disdain theory and respect only practical knowledge, forget that the one proceeds from the other, and that theory, properly speaking is only law deduced from facts; it flows from them and also governs their application." I

"The instructed officer, contrary to what is held by those who disdain theoretical studies, will have less hesitation, and feel less embarassment in action, than the ignoramus who depends solely upon the inspiration to be afforded by his good sense. He will also be more calm because he will know what should be done, and more modest because he is convinced that the wisest man knows but little in comparison to what remains to be learned." 2

Operational maneuver — what is it, what are its origins and will it work today? The term *operational maneuver* is in vogue, discussed in some detail in the current FM 100-5 and mentioned repeatedly in subsequent articles dealing with doctrinal issues. The Soviets have really popularized the concept by planning for the introduction of specially-tailored Operational Maneuver Groups in the opening move of a Western European conflict. Officers in the American military have become enamored with the concept because it lends a unique focus to the operational level of war. But exactly what is operational maneuver and where did it come from?

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This paper is an effort to comprehend fully the operational maneuver concept, to discover its genesis, and to ascertain whether or not it is an

executable concept on today's battlefield. I will initially define operational maneuver based on professional consensus. Secondly, referring to recognized Soviet analysts, I will describe the Soviet Operational Maneuver Group (OMG) concept which to date is the profession's most fully developed and mature concept. Thirdly, I will delve into history to trace the growth of the OMG concept from both Soviet-Russian-Asian tradition and non-Asian influence. I will attempt to show that the idea of operational maneuver really began with the cavalry strategic raids of the American Civil War and that the Russians subsequently were influenced by that successful innovation. Theoretical support of the concept will be presented where appropriate.

Finally, because this appealing doctrinal concept is yet untested in the European environment, I will review some experts who have critiqued the OMG/deep battle concept in an attempt to determine if it can work as envisioned.

#### PART II

"...we should now be in a better position to understand the purpose of all the things which we have for years swept under the rug as 'echelons above corps' and 'too hard to solve'." 1

"Thus, on the day of battle, I should want the general to do nothing. His observations will be better for it, his judgment will be more sane... Many commanding generals only spend their time on the day of battle in making their troops march in a straight line, in seeing that they keep their proper distances...and in running about incessantly themselves. In short, they try to do everything and, as a result, do nothing. They appear to me like men with their heads turned, who no longer see anything and who only are able to do what they have done all their lives, which is to conduct troops methodically under the orders of a commander.

"How does this happen? It is because very few men occupy themselves with the higher problems of war. They pass their lives drilling troops and believe that this is the only branch of the military art. When they arrive at the command of armies they are totally ignorant and, in default of knowing what should be done, they do only what they know." 2

The 1986 version of FM100-5 defines operational art as "the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations." 3 The operational level is the essential link between strategy and tactics, and the calculated campaign planning designed to accomplish strategic goals and objectives. 4 We need to achieve those strategic objectives with good

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campaign planning and the expeditious use of large units which gain operational advantage. General Glenn Otis, CINCUSAREUR, has stated that "the primary purpose of the operational level is to gain positional advantage over the enemy" 5 and "at the operational level...your goal is not to kill the enemy, but to provide opportunities for the commander at the tactical level to kill the enemy. Your operational objective is to put the enemy in harm's way." 6 Given these short formulas for operational art and the operational level of war, then exactly what is operational maneuver?

recessary to defeat an enemy at both the tactical and operational levels are maneuver, firepower, protection and leadership. 7 The leaders, of course, pull all the dynamics together, but maneuver is the key factor. "Maneuver is the movement of forces in relation to the enemy to secure or retain positional advantage. It is the dynamic element of combat — the means of concentrating forces at the critical point to achieve surprise, psychological shock, physical momentum, and moral dominance which enable smaller forces to defeat larger ones. . . . Effective maneuver keeps the enemy off balance and thus also protects the force. It continually poses new problems for the enemy, renders his actions ineffective, and eventually leads to his defeat." 8

Similar to General Otis' statements, operational maneuver "seeks a

decisive impact on the conduct of a campaign. It attempts to gain advantage of position before battle and to exploit tactical successes to achieve operational results. . . . Effective operational maneuver requires the anticipation of friendly and enemy actions well beyond the current battle. . . and the movement of large formations to great depths." 9

Another way of defining it is: "Maneuver is the essence of our fighting doctrine. Maneuver, in the operational sense, is the swift positioning of combat units to attack the enemy's rear, strike his flank, cut his lines of communications, bog him down in non-decisive areas, fall on an isolated segment of his force, or elude his attack. Maneuver is the means to seize or retain the initiative. Maneuver is the means of concentrating overwhelming combat power at a decisive time and place. Maneuver is the means to create and exploit tactical and operational advantages. It is the means to fight outnumbered and win." 10

COL L. D. Holder, one of the authors of FMiOO-5, reiterates that "in operational maneuver, opposing commanders try to secure favorable terms of battle by obtaining advantages of position or strength. To do so, they shift directions of movement, change dispositions, probe and feint, throw obstacles in the enemy's path, and, at the best opportunity, mass and commit their forces to battle. In open warfare, this may entail movement of the entire force. In static situations, it involves deception, detailed preparations and rapidly concentrating

forces just before battle." 11

Somewhat congruent, but with a much different bent (and certainly not doctrinal), is military reformer Edward Luttwak's idea of relational-maneuver. Luttwak contends that maneuver doctrine is much more appropriate than a firepower-attrition doctrine, ensuring that this operational maneuver 1) avoids the enemy strength as much as possible, 2) uses deception in every phase, and 3) is truly elusive and achieves momentum. 12 He uses the German Blitzkrieg of 1940 to illustrate his key points, that the goals of relational-maneuver are to 1) "incapacitate the enemy political-military system by destroying political and military command centers. . . " and 2) "destroy selected critical war fighting and recovery facilities. . . " Luttwak recommends the deployment of theater-specialized formations configured especially to exploit the weaknesses of the particular enemy forces in each theater. . . . "13

The common threads throughout all the foregoing descriptions of operational maneuver include many of our longstanding principles of war (maneuver, mass, offensive, objective, surprise) and our more recent tenets of AirLand Battle doctrine (agility, initiative, depth, and synchronization). This should not be surprising in that operational maneuver is not a new concept, but simply a reemphasized concept which had fallen out of use in the United States military since World War II.

We cannot fully appreciate or understand operational maneuver, however, until we review the thinking of the world's most experienced practitioners of operational maneuver warfare — the Soviets. The Germans in World War II, from the early <u>Blitzkrieg</u> on their Western Front to several campaigns on their Eastern Front, were great executors of operational maneuver (especially von Manstein and Guderian), but their loss of the war made the Russians (who likewise practiced this art on a grand scale) the uncontested "experts" at the operational level.

Charles J. Dick, noted British expert on Soviet defense policy and strategic, operational and tactical concepts, has written several articles 14 as well as the British Army Field Manual on Soviet operations 15 and succinctly describes the guiding principles of Soviet operational art, and, consequently, operational maneuver:

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<sup>\*</sup>Mobility and a high tempo of combat operations -- with the focus on speed and flexibility.

<sup>\*</sup>The concentration of main efforts and the creation of superiority in forces and means at the decisive place and decisive times -- quickly and with both quantitative and qualitative correlation of forces.

<sup>\*</sup>Surprise -- along with deception and secrecy.

<sup>\*</sup>Combat activeness -- essentially seizing and holding the initiative -- within their overriding stress on the offensive -- keep the momentum and pressure -- be bold.

<sup>\*</sup>Preservation of the combat effectiveness of friendly troops – active and passive protection measures and concern for morale of the troops.

<sup>\*</sup>Conformity of the goal of the operation to the conditions of the actual situation -- realistic assessment of own and

enemy's strengths and weaknesses.

\*Coordination of all branches and arms and effective command and control.

\*Simultaneous action upon the enemy to the entire depth of his employment -- attack the enemy rear to effect him psychologically and politically as well as physically and militarily. 16

Whether or not the Soviets can execute these principles of their operational art theory, and specifically operational maneuver, will be addressed later. For now, note the obvious similarities between these Soviet principles and the previously described definitions of United States operational maneuver. The commonality of theoretical principles is striking. 17 The four tenets of AirLand Battle are embedded in those eight Soviet principles, as are most of the US principles of war. Should that commonality be surprising? I think not.

Operational maneuver is thusly defined and described. Many large formations are capable of operational maneuver, but one of the most obvious implementations of Soviet operational art is their Operational Maneuver Group (and we should not take lightly the name they have selected for this modern formation — one geared to penetration deeply into an opponent's operational defenses 18). What is this operational deep strike force?

#### PART III

"The whole point of an OMG is that it is inserted into the enemy rear as early as possible, so that its activities help to crumble the defense from within. The OMG helps bring about the defeat of the enemy defense and a political collapse, and does not merely exploit a victory won by the main forces." 1

"The rear offers masses of prime targets -geographical features, command and control and
communications facilities, logistic installations,
air-defense complexes, airfields, etc. They cannot all be
adequately defended or moved out of harm's way. The
disruption and psychological damage done by an OMG
could be immense." 2

The Soviets have studied long and hard the NATO defense structure and ways to defeat it. The Operational Maneuver Group, while not innovative but rather an extension of World War II successes, is the most challenging and exotic (yet untested) part of their current offensive operational doctrine. The OMG is more than an exploitation force in that it sets the pace of the entire campaign. Chris Donnelly tells us that the Soviets believe that to win a conventional war in Europe (and they too want to do everything within their power to avoid a nuclear exchange), the key ingredient will be speed. They must initially achieve some surprise at the strategic and operational levels with enough first echelon strength to fix the NATO defenses and begin to find the weak links ripe for penetration. This first powerful stroke in several potentially vulnerable areas would force the Allies to commit reserves to plug those gaps. Then the Soviets

would commit highly "mobile" 3 formations (OMGs), either reinforced divisions in support of an army or reinforced armies in support of a front, to pour through at a penetration to strike deep into the Allied operational depth. 4

Charles J. Dick describes the OMG as a large formation designed to carry the battle deep into the enemy operational rear. This formation (division or possibly army) would be reinforced with air support, artillery, air defense, engineer and extra logistical support. It would have a mission which would be different from a follow-on second echelon of forces. It would rely a great deal on the ingenuity of the commander, but specifically it would 1)conduct deep raids against enemy communications centers, headquarters, airfields, air defense sites, logistics units and facilities, and nuclear delivery means, 2)attack and destroy any enemy reserves it might encounter in the way of meeting engagements, 3)seize enemy defensive lines in the rear to deny their use by the enemy, 4)block withdrawal routes and attack the enemy from the rear, and maybe even 5) seize strategic political or economic objectives (like the enemy capital or a key seaport). 5

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The whole concept of the OMG is not to get it involved in a tactical head-knocking fight. On the contrary, they would much prefer that no real fighting be done. They want to turn loose this powerful, mobile juggernaut on the enemy rear area to run rampant from one key objective to another. They want to

insert it deep as early as possible and let it run amok to help bring about a defensive collapse and lead to a quicker political collapse and eventual decision. Nighttime commitment would be especially disastrous and the shock could bring about immense psychological damage. 6 They want to "force the decision as far from the defender's main strength as possible." 7

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#### PART IV

- "The OMG. . . is the result of an evolutionary sequence of doctrines, concepts and force structures with which Russian and Soviet armies have achieved success. To suggest that it is a revolutionary idea is to fail to understand history." I
- "...the current Soviet operational formation is not a unique revolutionary creation. It is a reflection of a long tradition of structuring and deploying for battle. In a sense, it represents a full maturation of the concepts Tukhachevskiy espoused when he defined deep battle in 1936." 2

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Given the foregoing description of the OMG, what is its genesis? Where did the idea come from? As indicated above, the OMG is not a revolutionary concept. Richard Armstrong detailed the Soviet World War II experience which led them to use formations which they called "forward detachments" 3 and "mobile groups." He wrote that these formations were carefully organized "to develop the tactical success" and were "committed through gaps, at boundaries, or from the flank of the first-echelon units primarily along successful axes." They followed "with the objective of rapidly developing the attack to the whole depth of German defenses." The Soviets were convinced that "the decisive condition for complete destruction of the enemy was achieving a high attack tempo, for even short halts gave the enemy breathing space to maneuver or counterattack." 4

According to Chris Bellamy, a recognized Soviet military history

authority, the OMG is the "offspring of the forward detachment and the mobile group, and has aspects of both their characters. The OMG is...a forward detachment in its mission to destroy, disrupt, or seize specific objectives rather than enemy forces. However, in scale, and in the sense that it starts behind the first echelon and passes through it, exploiting success to some extent, it is more analogous to the 1941–1945 mobile group. Its role in rapidly shifting the focus of combat to the enemy rear is also more consistent with the role of the mobile group as a component of the 'deep operation.'" 5

COL David Glantz, one of this nation's most respected experts on the Soviet Army, also described in detail the differences between the forward detachment and the mobile group and that, over the years, the distinction has really ceased to exist. "...the older functions of the forward detachment and mobile groups have almost merged. Together, the contemporary forward detachment and operational group create the conditions for exploitation to the depth of a defense and conduct the actual exploitation. The forward detachments are the forward elements of the exploitation forces, and the operational groups are the main body which completes the process...." 6

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But while it is true that the Soviets perfected their theory and use of these mobile formations during the incredible fighting on the European Eastern Front during 1943-1945, this concept was not born of World War II.

The Soviet theory of deep operations, which became well developed in the between-World War years, was a direct outgrowth of the bloody carnage of the trench warfare of World War I, when it seemed that no one could crack the "maneuver" code to overcome the hellish positional, defensive warfare dominated by machine guns and barbed wire. 7 V.K. Triandafillov formulated the basis of the 1920s-1930s operational art -- deep operations theory. He wrote that "deep and crushing blows" were necessary to achieve strategic goals. For him, operational art had to employ fully "all capabilities to develop blows to the maximum depth permitted by the physical and moral condition of troops, by road restoration and supply conditions." He taught that "deep and crushing blows may put entire state organisms out of the game quite rapidly" and "may lead to the rout of their armed forces piecemeal." 8 He urged changes in Soviet military organization and doctrine and pushed for new equipment assets (tanks and trucks) to carry out this mobile, deep theory.

The man who was most responsible for gaining support for this theory of deep operations and for reequipping the Soviet Army was Mikhail Tukhachevskiy.

COL Glantz underscored Tukhachevskiy's role in his study of the evolution of Soviet operational formations and deep battle. It was Tukhachevskiy who, agreeing with Triandafillov and others, had the deep operations theory codified in the official field regulations with words like "...penetration of the tactical zone

of the defense by attacking units with widespread use of tank forces and violent development of tactical success into operational success with the aim of complete encirclement and destruction of the enemy." 9

It was Tukhachevskiy who helped to bring on military mechanization beginning with the Five Year Plans of 1928. Malcolm Mackintosh wrote that the offensive-minded and "fire-eating" Tukhachevskiy did not have all the answers to combatting the power of the machine gun in the early 1930's, but "he envisaged the day when the tank would be able to outmaneuver infantry weapons, and set himself the task of providing the Red Army with the necessary armoured vehicles and supporting equipment." 10

The irony of all this, of course, is that these deep operations advocates were not around at the beginning of the next war. Stalin purged these visionaries in 1937 and ensured that the Soviet Army would watch as the Germans (with their own visionaries like Manstein and Guderian) would be first to demonstrate <a href="Blitzkrieg">Blitzkrieg</a> to the rest of Europe. But where did Triandafillov and Tukhachevskiy get the ideas for the basis of their deep operations — mass mechanization theories? Like most evolutionary thought, they got it from their own professional reading and from their immediate experiences in World War I, their Civil War (1917–1922), and Russian military history.

The Russian World War I experience was not very positive and had little to

offer doctrine writers. For example, they had 36 cavalry divisions entering the war and "their commanders made lavish claims about a new wave of Huns from the East overrunning everything before them and thrusting right into the heart of Germany. Reality was a bitter mockery of these hopes. In the first few days some Cossacks had penetrated into East Prussia and the German press began to feature lurid stories about wild Asiatics and a trail of rapine and pillage. Their success was short-lived." 11

COL Glantz noted the importance of certain developments of the Russian Civil War. He pointed out that the concept of "mobile operations on a broad front in great depth, the rapid redeployment of forces over wide expanses of territory, the use of shock groups for creating penetrations and the widespread use of cavalry forces as 'mobile groups' exploiting offensive success were all legacies of the [Russian] Civil War." 12

"A classic example of an operational level mobile group acting just like an OMG can be seen in the breakthrough of the Polish front by a cavalry army south of Zhitomir in May-June 1920." 13 Led by Semyon Mikhaylovich Budyenny, the famous Red First Cavalry Army (Konarmiya) accomplished this great deed using a combination of stealth and shock rather than the previously accepted tactics of frontal attack and cavalry charge. Then once the breakthrough was realized, the mounted formation wreaked havoc on the enemy rear. 14

Chris Bellamy notes that "The Soviet and, before them, Imperial Russian armies have for a long time envisaged striking deeply into the enemy deployment using raids." 15 He cites two specific examples from earlier Russian military history which he suggests are easily identifiable antecedents of today's OMG. General Gurko's forward detachment of the Russo-Turkish War (1877) had the mission of seizing passes, destroying Turkish detachments which could be dealt with easily, and paving the way for the main body. Like today's OMG, it was a large formation augmented with additional engineers. Once committed, the commander had great freedom to act within certain guidelines. There was also a realization of the psychological and moral effect such a unit could have on both the enemy and the local populace. The second example is General P.I. Mishchenko's raid during the Russo-Japanese War of 1904-1905. This deep raid by over 7,000 cavairymen was not totally successful or exactly analogous to current OMG doctrine, but it demonstrates some parallels. The unit was essentially independent and large enough to cause great concern in the enemy rear areas. It had a specific target which, if destroyed, would have affected the war both operationally and strategically. Mishchenko's brave force, comprised mainly of great Cossack horsemen seriously alarmed the Japanese. 16

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We have not yet, however, gone back in time far enough in Russian-Asian history to discover another important antecedent and influence on modern Soviet

operational maneuver — the Mongol hordes! Steven Stinemetz wrote that these 13th century warriors were experts at mobile warfare and espoused solely an offensive way of warfighting. They avoided head to head fighting whenever possible, preferring the surprise flank or rear attack or ambush and then exploitation of success. 17 Mongol warfare at its best, as characterized by Stinemetz, exhibits: "acquisition of strategic intelligence necessary for long-range maneuver; exploitation of deception to dispose the enemy's reserves; intensification of internal dissent within the enemy's forces; use of Mongol speed and endurance to achieve surprise; ... expropriation of regional resources to supply Mongol forces; occupation of cities before effective resistance appeared; and timely coordination of wideranging detachments." 18 Those characteristics are certainly reasonable goals of a modern OMG.

In another study, Chris Bellamy compared the army of Genghis Khan with the Soviet Army of today to demonstrate the Tartar-Mongol influence. He concluded that 1)Mongol operations were overwhelmingly offensive, 2)the Mongols were astute at a level of war higher than the pure tactical, 3)they preached mobility and high tempos of operations, 4)they believed in heavy firepower (more specifically, "arrow" power), 5)they bypassed enemy islands of resistance, 6)they sought surprise, 7)they considered logistics for long range maneuver, and 8)they aimed for psychological advantages — all of which are OMG objectives and

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Bellamy acknowledges that some of the similarities may be partly coincidental, but the links are present from the Khans to today. Tukhachevskiy surely did not intentionally copy the Mongolian system nor consciously evolve deep OMG-type theor, from the Tartar tradition, but the cultural and historical link is present and probably had an influence. In short, Bellamy noted that the "Mongol practices of breaking through the enemy defence before he has time to complete his preparations, encirclement, parallel pursuit and getting behind the enemy all converge in the modern Soviet device of the OMG." 20 It is interesting to note that no less an authority of military history and theory than the Englishman B.H. Liddell-Hart also studied the Mongols in great detail in his search for support of his maneuver warfare theory. 21

We have now traced the OMG of today directly back to the Soviet mobile groups of World War II, to the deep operations theory of the between-war years, to the Russian Civil War cavalry raids, to Mishchenko's raid in the Russo-Japanese War, to Gurko's forward detachment of the Russo-Turkish War, and far back to the aggressive Mongols of the 13th century. There are striking similarities throughout to today's OMG, although today's OMG concept is also very much the direct result of an attempt to avoid the unbelievable casualties of recent attrition warfare brought about by modern lethal weaponry.

#### PART V

"The long-distance strategic cavalry raid represented a new concept for the use of mounted troops in war. Developing side by side with dismounted tactics which themselves emerged as a reaction to the significantly changed circumstances of the modern battlefield, it was no accident that the raid should also arise as part of the evolutionary process which transformed cavalry into an indispensable component of the major [American] Civil War field armies." 1

Thus far we have reviewed only Soviet and Russian and Asian history for precursers of the OMG concept. And although the Soviets proudly claim to be the fathers of the operational level of war — as an outgrowth of the great army groups and greater span of control of World War II — they often intimate that the deep operations theory is solely their brainchild. Ziemke wrote that the Soviets often conveniently omit previous references to operational maneuver and deep operations, although one author did note that "For the sake of historical accuracy it should be mentioned that the question of deep battle [the tactical aspect of deep operations] was raised first by the English military theoretician Fuller late in 1918." 2

The truth, of course, is that since the beginnings of warfare, there have been precious few really innovative ideas. Progress is a result of evolution brought about by improvements and changes in technology and weaponry and

little different. The Soviets have not come to their OMG concept in a vacuum.

They have looked naturally to their own history primarily. But they are and have been students of the military art in general and pay great heed to the thinking of others.

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General J.F.C. Fuller, for example, had some influence on both German (especially Guderian) and Soviet (especially Tukhachevskiy) military minds. In his Plan 1919, another effort at overcoming the horrible trench-attrition warfare of World War I, he suggested that the goal should not be to destroy personnel, but rather to destroy command and control apparatus. A proponent of massed, mechanized, smaller professional armies, he proposed that "a sudden eruption of squadrons of fast-moving tanks, which unheraided would proceed to the various enemy headquarters, and either round them up or scatter them. Meanwhile every available bombing machine was to concentrate on the supply and road centres. Only after these operations had been given time to mature was the enemy's front to be attacked in the normal way, and directly penetration was effected, pursuit was to follow." 3 The Plan was his mobile protected offensive power theory carried to a logical extension. 4

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Fuller's famous contemporary and colleague, Captain B.H. Liddell-Hart cannot go unnoticed here either. Liddell-Hart also was a renowned proponent of

maneuver and armored warfare formations. He was especially interested in the potentialities of mobile operations behind enemy lines, with special reference to raids on communications. He concluded "that there was no good reason why these mobile raids could not be duplicated on a larger scale against armies whose communications were vulnerable to attack by aircraft, airborne engineers, or tanks." 5

Liddell-Hart analyzed that "when acting in close cooperation with the army, the mobile army proved ineffective in its offensive action. . . when used independently, for strokes against the enemy's communications, the mobile arm was occasionally of great effect. . . " and "the effect seems to have been greatest when executed in conjunction with action by the main force, and when the enemy's force was on the move. Long range moves seem to have been more effective than close-range." 6 He opted for strikes deep in the enemy rear, not only to affect the minds of the enemy troops, but to really affect the mind of the commander. 7 This concept of deep strategic penetration was a logical and realistic outgrowth of his study of both the Mongols and the American Civil War.

The horse cavalry experiences and lessons learned from the American Civil War, I submit, have had an enormous impact on the formulation of subsequent maneuver doctrine, including deep operations and eventually the OMG concept. The American Civil War is probably the real beginning of the execution of deep.

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operational maneuver. Napoleon, perhaps the father (the first real executor) of operational art, the genius who was the first and best at methodically calculating the movements of giant corps to place them on the battlefield at the right place and time, never really looked past the collision of forces in decisive tactical battle. He had his operational reserves (usually cavalry) which often came onto the battlefield last to turn the tide and seal the victory, but he never really planned and executed deep operations which severed enemy lines of communications and facilities. 8 Battlefields were still relatively small and Napoleon's stated objective was the massed enemy formations, the enemy's center of gravity. The weaponry changes from the Napoleonic era to the American Civil War — specifically rifled, breech-loading muskets and better artillery — made Napoleonic tactics obsolete (although used without success throughout the war with huge casualties) and forced military men to seek other ways to win battles.

A major innovation of the American North-South war was the "strategic long-distance raid." The idea began slowly and was used initially almost solely by Confederate cavalrymen like J.E.B. Stuart, John Mosby, Nathan Bedford Forrest, John H. Morgan and Turner Ashby. These horsemen went beyond their traditional missions of reconnaissance, surveillance and security. They began to separate themselves from their main body by greater and greater distances and cause disruption wherever they went, focusing on enemy wagon trains and railroad lines.

These highly mobile (as long as their horses lasted) bands were initially and usually quite small and rarely stayed in any one place very long. 9

Southerners were first to be good at cavalry raiding probably because they had more of an aristocratic and horse-loving tradition than the northerners, they had better horses initially, and they were fighting primarily on their own turf. As the war progressed, these cavalrymen got better and better at this new way to wage war in the enemy rear. Raids were conducted either as ends in themselves or as diversionary maneuvers designed to distract the enemy's attention from larger movements by the main army. "A raid could be pronounced a full success only when it made strategic as well as tactical contributions to the fortunes of the army." 10

"By the end of 1862, . . . Stuart and his cavalrymen had successfully accomplished two raids by which they not only gained information about the Union Army's strengths and dispositions but also attained much needed supplies. Of equal importance, Stuart's raids greatly alarmed Federal leaders in Washington, causing them to draw off troops for the defense of that city." 11 Originally conceived and planned as long distance/extended reconnaissance missions, J.E.B. Stuart was the first to turn them into something much more important during the Seven Days Battles in Virginia in June of 1862. His second raid was in August of 1862 and successfully attacked Pope's headquarters. Neither raid was successful

potential for greater use. It gave General Robert E. Lee the idea to send Stuart and his cavalry raiders into Pennsylvania, the first time a Confederate force had ventured onto northern soil; the immediate results were minimal, but the concept was now accepted as worth the risk. Stuart made four more raids during the Fredericksburg campaign. 12

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Out west such horse soldiers as Forrest and Morgan were beginning to extend their influence on the battlefield beyond simple reconnaissance. Morgan and his 900 troopers became a thorn in the northern side in Tennessee during the summer of 1862 when he captured hundreds of prisoners and caused damage to the critical rail network. The first big "strategic" raid in the west was Van Dorn's 2500-strong force which fell on General Grant's lines of communication in December of 1862 at Holly Springs, burned critical supplies, captured 1500 prisoners, and forced Grant to modify his plans along the Mississippi River and Vicksburg. 13

The Federals were slow to learn this new facet of war, but they learned well. They built up a structure which began to produce better horses and better, more aggressive young cavalry leaders. Until 1863 they had not done very much long distance maneuvering, and, like their southern counterparts, were not immediately successful. Their first large scale attempt was when General Hooker

sent Stoneman and 4500 cavalrymen around Lee's army during the Chancellorsville campaign. The results were slim, but provided encouragement to Union leaders for future forays. 14

Raids became more frequent, better organized with well defined objectives, and included more and more cavalrymen. The forces became more powerful and more threatening to the enemy, and they became more destructive and of greater value "strategically." Grierson's raid through Mississippi into Louisiana in April of 1863 was an important diversion for Grant in his battle against Pemberton and the winning of the Vicksburg campaign. Covering 600 miles in sixteen days, Grierson and his 1700 men destroyed several miles of railroad and 3000 stands of small arms, captured 1000 horses and burned great quantities of supplies. In addition his raid confused Pemberton and occupied forces which Pemberton could have used elsewhere. 15 Every raid did not succeed; even when well planned, some raids failed miserably — like the ill-fated 4000-man raid on Richmond led by Kirkpatrick and Dahlgren in early 1864. 16

Most of the remainder of the war was uphill for the Federals and downhill for the Confederates. General Phil Sheridan's huge cavalry corps put a giant nail in the Southern coffin in May of 1864 when he not only defeated Stuart's cavalry at Yellow Tavern but killed Stuart too. The Confederates, who conceived the long range mounted raid, were to be repaid "with a vengeance for their ingenuity." 17

Sheridan gained great fame, Custer made a name for himself, and, as the war drove on to it ultimate inevitable conclusion, "strategic" raids got bigger and threatened not only military targets but non-military targets as well.

The last raid of the war was, appropriately, the largest -- it was really a "mounted invasion of the deep South." 18 James Wilson had seven cavalry divisions numbering over 13,000 troopers, the largest cavalry force of the war. Wilson, at age 27, was given the independent mission to go south, defeat Forrest, and destroy the South's remaining ability to support the war logistically. In March-April of 1865, his great force swept south and accomplished all of its objectives, culminating with the taking of Selma and the defeat of Forrest's forces, hastening the end of the war. Denison called it "one of the most extraordinary affairs in the history of the cavalry service." 19 Another author was so impressed that he labeled it Yankee Blitzkried. 20 The destruction caused was overwhelming for the time - seven iron works, seven foundries, seven machine shops, plus several factories, arsenals, magazines, 35 locomotives, 565 railroad cars, 320 cannon, and immense quantities of supplies, with only a small loss of manpower. 21

The "strategic" raid had matured as an accepted, meaningful, valuable part of warfare -- at least in the United States. Whether on long or short range expeditions, raiders "were to strike unexpectedly and decisively at assigned

possible. . . to create maximum damage to enemy resources in minimal time. . . . "22 Wilson's raid culminated the evolution of the raid. "The Federal cavalry which independently invaded the last stronghold of the Confederacy bore little resemblance to the awkward, inexperienced, and divided branch of the services which was almost helpless during the early stages of the conflict." 23

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#### PART VI

"Few wars have so fired the popular imagination as the American Civil War. . . . A surprising number of European soldiers traveled to America to observe the conflict, and periodically since 1865 the Civil War has been the object of special study in the major armies of Europe. Exactly what was learned, how much military doctrine actually was influenced by the Civil War, is not easy to determine." 1

"...nor was it surprising that Red Army leaders should search the world's press and books for forward-looking military writers and thinkers, and that a number of them (including Captain Liddell Hart) should have been approached to enlist their knowledge, experience and imagination in the service of the new Red Army." 2

Luvaas, the prolific writer and noted American historian, detailed the many legacies of this war and specifically how its lessons were passed to others in his The Military Legacy of the Civil War. Many European visitors observed at least parts of the war. Because of travel constraints, they mostly saw the Eastern actions, but had access to the stories of the Western fighting. One German officer named Scheibert was impressed with the cavalry actions he had seen and heard about although he was not totally sold on the value of the strategic raid. He thought that the results of such raids were "exaggerated" and "even when executed against untrained troops and armies dependent upon supply depots, in a country

with few railroads and an inadequate telegraph system, and where thick forests could mask the movements of entire armies — even under these ideal conditions the Civil War cavalry raids had brought only limited success. In Europe, where such favorable conditions did not exist, cavalry raids were bound to be still less effective." 3 Scheibert was impressed with very few things worth recommending to his army. It is an irony that the idea of the strategic raid which eventually (at least indirectly) evolved to the <u>Blitzkrieg</u> was mainly passed on to the Germans by the British gentlemen Liddell-Hart and Fuller.

General von Bernhardi did pick up on the concept much later. Luvaas points out that he alone among the Germans placed much emphasis upon the strategic raid, arouing that if modern weapons had limited tactical action of cavalry, its strategic importance had if anything increased. 4 Bernhardi, in discussing the future of cavalry (circa 1909) predicted that cavalry "will be called upon for attempts against the enemy's communications," which is strategically important and "these will be all the more important in cases where the district we are fighting over is too poor to supply the enemy's forces, or where operations have assumed a stationary character, as before Fredericksburg, Paris, and Plevna, and it becomes desirable to hinder the use of the railways for the transport of troops or evacuation of supplies." These "undertakings...will frequently assume the character of 'raids' in which the essential purpose is to cover great distances

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rapidly, often with the sacrifice of all communications with one's own forces, to appear suddenly at previously selected positions, and after completion of one's immediate object to disappear suddenly, before the enemy can bring overwhelming numbers against the assailant." 5

The French observers as a group were somewhat more appreciative of what they had seen. Luvaas recounts that several were specially impressed by the strategic raid; one officer recommended to his fellow officers to read "what had been written on the war of Secession, in which the Americans have employed this kind of tactic on a very large scale, with much success." Another Frenchman "cited the Civil War raids to show what could still be accomplished by way of seizing enemy convoys, destroying vital railroads, and cutting telegraphic lines. In Europe, 'populated, cultivated and civilised as it is,' it might not be possible to emulate the raids of Stuart, Stoneman, Sheridan, and Morgan, but this did not mean that independent cavalry could not perform many useful strategic services in future wars." 6 P. Poullet, a military journalist, predicted that future cavalry would include not only reconnaissance, but "independent action against enemy communications and supplies" — all as a result of his study of the Civil War. 7

A highly respected Canadian, LTC George Denison (who was commissioned by the Russian Tsar and had an influence on Gurko's actions in 1877), did not directly observe the Civil War, but subsequent interviews with many Civil War

officers influenced his writings and feelings about cavalry which enjoyed widespread reading in Europe and won over many adherents. Denison advocated that a duty of cavalry was "to make great raids on the enemy's communications. There is no need to enter into details, but we may simply refer to the raids of Stuart, Forrest, Morgan, Wilson, and Grierson. . . they might be used for turning movements around a flank." 8

The British had several eyewitnesses to the war. Most of them were not enamored with what they had seen, but MAJ (later Sir) Henry Havelock was the first to indorse "wholeheartedly" the cavalry tactics he had seen. He appealed to his army to rid itself of current continental cavalry doctrine and adont the organization and tactics of Sheridan. He thought that those tactics, including the strategic raid, would be especially useful in India. 9

Liddell-Hart and Fuller, of course, were not direct observers of the American Civil War, but their intense study of the war and subsequent works had perhaps the greatest influence on European military thought. Their theories on armored warfare, while not exactly alike, were based on maneuver, were largely influenced by the mobile strategic cavalry raids of the American Civil War, and had great influence on subsequent maneuver warfare proponents in Germany (Guderian and others) and the Soviet Union (Tukhachevskiy for sure).

It is then well documented that European military men were very much

aware of the strategic raid lesson learned from the American Civil War. It is obvious that some heeded the lesson and some did not. For example, Baron Helmuth von Moltke, the Prussian Chief of Staff, was not at all impressed with the American experience. He reputedly stated that "the affair in America was nothing but a matter of two armed mobs chasing each other around the country, from which nothing could be learned." 11 It is certain that both the Prussians and the Austrians during 1866 did not choose to apply any lessons learned during their short, brutal war. Arthur Wagner, in his review of the Koeniggraetz campaign comes down heavily on both sides: "Their use of cavalry showed either an ignorance of, or contempt for, the experience of the American armies" and "Both armies seem to have been afraid to let their cavalry get out of sight. . . . If they had studied the great raids of the American cavalry leaders, they would have learned a lesson which there were excellent opportunities to apply." 12 Wagner further states that "It is easy to imagine what would have been the effect upon the Prussians during their advance to the Danube, if a Stuart, a Forrest or a Grierson had operated against the railways upon which the supply of the invading army necessarily depended." 13

In 1889, Wesley Merritt, Sheridan's second-in-command during the Appomattox campaign, wrote in an English journal that the English need to pay greater heed to the cavalry lessons of the American Civil War. He stated that the

Russians were profiting better by the American experience. "In 1884 a former British military attache at St. Petersburg had written that 'for some years past influential officers in the Russian Army have constantly advocated that European cavalry of the present day, equipped and drilled after the old-fashioned methods, is unsuited to the requirements of modern warfare, and have insisted that a cavalry. . .taking as its model and example, both as to armament and method of fighting, the American cavalry of the Civil War is the kind of cavalry which will make its mark in future warfare." 14

The days of horse cavalry became numbered with the advent of mechanization, and all of the lessons of American Civil War cavalry were not to have lasting benefit. But the strategic, long-distance raid had its real genesis here, and, coupled with the elan, daring, risktaking excitement of horsemen on the move, began to make inroads (albeit slowly in some armies) into accepted military thought. The optimum raid was fast paced, independent, well coordinated, with stated objectives in the enemy rear, used surprise, and operationally gained strategic goals — characteristics not unlike today's OMG.

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Thus it is that the vaunted Soviet OMG concept, shaped partly by the Mongol operations of the Russian past, also draws on the American Civil War cavalry strategic raid. Nothing succeeds like success, and this mobile, raiding, deep attack concept has seen several successes which enhance its popularity and

use — from the aforementioned American Civil War raids to isolated Russian use by Gurko and Mishchenko to Budyenny's Russian Civil War deep exploits to the German <u>Blitzkrieg</u> to the Russian mobile groups of World War II. The concept, when executed well, worksi Current Soviet plans include its use – but will it work on today's and the future's European battlefield? There seems to be a lot of agreement that operational maneuver as earlier defined, and used successfully since the American Civil War, and currently best expressed as the OMG is the way to win. There is no agreement, however, on whether or not it <u>can</u> work.

#### PART VII

Charles Dick is not sure that the Soviets can execute their operational maneuver theory. The OMG concept requires independent units whose leaders can operate out of communications with the headquarters, show initiative, and yet mechanically move through the enemy rear areas to achieve specified objectives. "In effect, the Soviet High Command would like initiative to be something that can be turned on and off like a tap. In practice, turning it on tends to prove difficult, not in the least because of a natural Soviet tendency toward passivity, reinforced by a system which usually rewards caution rather than boldness." 1 Dick also lists conflicts between 1)the requirements of speed versus the need for realistic, detailed planning, and 2) the need for high tempo thrusts versus destroying enemy tactical units they may encounter. He also questions Soviet capability to "coordinate" (or "synchronize" in AirLand Battle terms) all the pieces of the OMG necessary to make it work -- specifically artillery support of the high speed advance, air defense, electronic warfare, close support aircraft, and command and control. 2

Dick is not the only doubter. Another critique lists some potential vulnerabilities of the OMG, specifically: 1)the speed and momentum required to continue to thrust deep as a large unit conflicts with the idea to break off smaller units to take objectives along the way; 2)the logistics required to support the fast

moving, deep attacking OMG may simply be beyond the capability of the Soviet logistical system (something they could not set up without being detected by NATO intelligence); 3)the reliance on airpower which is dependent on weather, must overcome NATO airpower, must be superbly integrated with land forces with great command and control links, and cannot be as successful outside the range of their attack helicopters; 4)penetration is necessary by first echelon forces, and, in order to succeed, must achieve at least tactical surprise; and 5)the officer corps may not be talented enough or prepared enough to carry out this ambitious concept. 3 "A sociological shortage of initiative makes commanders vulnerable to indecision when OMGs encounter unexpected threats." 4

Shields, while noting that the Soviets find the OMG and deep battle so attractive (because of a positive history and their assessment of current NATO defenses), also raises questions about some areas which could potentially defeat the concept: 1)can the deep force be resupplied enough to keep going deeper?; 2)can it defend itself well enough from high quality aircraft?; 3)can it avoid major pockets of resistance?; 4)can it avoid becoming a stationary target (for example, at bridge crossings or when blocked by refugee traffic)?; 5)can Soviet command and control systems minimally support the operation?; 6)can they hide the mobilization they must do and still achieve the surprise they must have?; and 7)what if the NATO defenses prevent the penetration they must have in order to

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Current U.S. AirLand Battle "deep attack" operational maneuver doctrine faces some of those same questions. As conceived, deep strike units must "rapidly transit the FLOT, drive deep, conduct lethal and violent attacks on the move to destroy high-value elements of the uncommitted echelons as they are encountered. refuse decisive engagement and prepare for commitment to continue the attack either on the rear of the first-echelon divisions or to the depth of the enemy's formations." 6 The difference is that where the OMG has several terrain objectives, the U.S. deep attack is focused on enemy forces rather than terrain. 7 COL L.D. Holder suggests that the deep attack can go after more than the enemy. It is inherently risky to attempt such attacks, but "the potential for success is so great that such operations will be justified in many instances. When directed against high-value targets such as enemy reserves, command posts, supply dumps or terrain choke points, maneuver forces can produce the windows for offensive action critical to defensive success or preserve the initiative for offensive operations." 8 The idea of the deep attack is to make the enemy change or deviate from his plan and pause to counter this new unplanned threat to his unit or his lines of communication, to make him reactive rather than proactive. 9 It seems that both sides -- the Soviets and the U.S. -- have evolved similar doctrine, a situation which could result in stalemating each of these aggressive,

operational maneuver forces. Who that would ultimately benefit is beyond the purview of this paper, but if the Soviet OMG capability is negated, then the Soviet ability to overwhelm Western Europe in a massive single stroke may be negated. In order to maximize the use of the OMG, it needs to be used as a "daring thrust" and introduced within the first two days of a conflict. That would create the intermingling of forces desired which the Soviets hope would negate the possible use of nuclear warheads. 10

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whether or not the U.S. (or NATO forces) could actually pull off deep operational maneuver is open to great debate. War game simulations have been testing the hypothesis for several years. COL William Brinkley considered the possibility of using a division-size U.S. Army OMG in a European environment and highlighted potential problems: we cannot maintain secure lines of communications upon which would depend evacuation of wounded and equipment to repair; we cannot get forward enough supplies (specifically ammunition and fuel) by airlift alone to maintain the continual fighting capability; and we basically do not have the force structure to allow the commitment of a maneuver strike force deep in the enemy rear which probably will not return as an effective fighting force. 11 We "do not have a division to waste as a deep operation OMG if a conventional nonnuclear war occurs in Western Europe." 12 Brinkley's conclusion

period across the FLOT using M1 and M2-equipped units. He recommends more limited goals, specifically a maximum of 50 kilometers or 24 hours of operation on shorter raids which could be supported by organic logistical assets and capabilities. 13

The answer, of course, is that no one is absolutely sure if the OMG (Soviet), deep attack (U.S.) concept will work. School is still out (and may never be called into session). History is replete with examples of bold, audacious operational maneuver being critical to victory — Grierson's raid, the German Blitzkrieg. airborne drops into Sicily, Slim's surprise move across the Irrawaddy in Burma, the great amphibious landing at Inchon. These are the great exploits which make men famous and win wars. There does appear to be agreement of both Soviet and U.S. thinkers that operational maneuver is desirable, and that the OMG-type deep attack concept has potential to meet the needs of both sides. Both are diligently working to refine the concept and to school its officers in how to execute it.

In order for the concept to work, it does seem that a whole host of variables have to be just right, including surprise introduction, the timing of the introduction, exceptionally accurate intelligence, an opening in the enemy defenses, overwhelming air power, enough maneuver space, an enemy rear area that will not or cannot put up much of a fight, the synchronization of several

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variables (like air defense, engineer, artillery and electronic warfare assets, and command and control), a big and powerful force with the freedom to go where the leader deems necessary, and a plan of support that will keep it going as long as it takes.

That sounds like mission impossible. That sounds like a tail order for even the most fine-tuned, superbly-trained army. Yet it may be the key to victory in a future conflict — the side that can execute this concept most effectively may become a winner. This operational maneuver concept has worked since American Civil War days, and is viable today. We must continue to study it and refine it and prepare to execute it if called upon. You can bet the Soviets will!

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## **ENDNOTES**

### PART I

- 1. Lieutenant General Brialmont, <u>Combat Tactics of Cavalry</u>, translated from the French by the U.S. Infantry and Cavalry School, (Fort Leavenworth, Kansas, 1893), p. III.
- 2. Ibid., p. IV.

#### PART II

- 1. MG Edward B. Atkeson, "The Operational Level of War," <u>Military Review</u> (March 1987), p. 31.
- 2. Maurice de Saxe, <u>Reveries on the Art of War</u>, translated and edited by BG Thomas R. Phillips, (Harrisburg, Pennsylvania, 1944), pp. 118-119.
- 3. U.S. Army, Field Manual 100-5, Operations, (Washington, DC, May 1986), p. 10.
- 4. L.D. Holder, "A New Day for Operational Art," Army (March 1985), p. 24.
- 5. John F. Meehan, III, "The Operational Trilogy," Parameters (Autumn 1986), p. 17.
- 6. COL William J. Bolt and COL David Jablonsky, "Tactics and the Operational Level of War," <u>Military Review</u> (February 1987), p. 4.
- 7. FM100-5. Operations, pp. 11-14.
- 8. Ibid., p. 12.
- 9. Ibid.
- 10. COL Thomas E. White and MAJ John D. Rosenberger, "The Armored Cavalry Regiment: Catalyst for Operational Success," <u>Armor</u> (March-April 1986), p. 11.
- 11. Holder, p. 27.
- 12. Edward N. Luttwak, "The Operational Level of War," <u>International Security</u> (Winter 1980–1981), pp. 70–72.
- 13. Ibid., p. 66.
- 14. Charles J Dick is a renowned authority. Among his articles used in my research: "Soviet Operational Maneuver Groups: A Closer Look," <u>International</u>

<u>Defense Review</u> (No. 6 1983), pp. 769-776; "Soviet Operational Concepts - Part I," <u>Military Review</u> (September 1985), pp. 29-45; and "Soviet Operational Concepts - Part II," <u>Military Review</u> (October 1985), pp. 4-19.

- 15. United Kingdom Ministry of Defense, <u>The Army Field Manual</u>, <u>Volume II</u>, <u>Part 2</u>, <u>Soviet Operations</u>, (London 1986).
- 16. Dick, "Soviet Operational Concepts Part I," pp. 34-42.
- 17. The similarity of AirLand Battle doctrine with Soviet doctrine has been noted by several authors, including CPT Stephen P. Aubin and CPT Robert E. Kells, Jr., "AirLand Battle Doctrine: Soviet Strategy Revisited," <u>Military Review</u> (October 1985), pp. 42-53.
- 18. Atkeson, p. 30.

### PART III

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- 1. Dick, "Soviet Operational Maneuver Groups: A Closer Look," p. 773.
- 2. Ibid., p. 775.
- 3. The term "mobile" has taken on a new meaning in modern times. Unlike previous eras when the only mobile arm was the cavalry it was mounted and could get from one place to another relatively quickly while everyone else was on foot or earlier in this century when motorized and mechanized units (and a few diehard cavalry units) "rode" into combat while much of the infantry walked, "mobile" alludes more to mission than to mode of travel. Nearly everyone on today's battlefield (in modern armies) is mobile in that they can get from one place to another with some speed, but the mission of nearly everyone is to fight the enemy in battle when he can be found. The OMG is a "mobile" group which needs to avoid decisive fighting with the enemy that might stop its momentum and "mobility" it must be continuously "on the move" to achieve its objectives of surprise, psychological shock, and depth. Mobility, in the OMG sense, does not refer so much to getting from one place to another, but to an overriding mission of maintaining continual mobility, movement, maneuver and thus momentum.
- 4. Chris N. Donnelly, "The Soviet Operational Maneuver Group: A New Challenge for NATO," <u>Military Review</u> (March 1983), pp. 43-60, also in <u>International Defense</u> Review (No. 4 1982), pp. 1177-1186. The citing here is from a School of Advanced Military Studies (Ft. Leavenworth, Kansas) reprint of several Course 3 (1987-88) articles, pp. 140-145.
- 5. Dick, "Soviet Operational Maneuver Groups: A Closer Look," p. 773, and The

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- United Kingdom <u>Army Field Manual</u>. <u>Soviet Operations</u>, p. 6-17.
- 6. Dick. "Soviet Operational Maneuver Groups: A Closer Look," pp. 773-775.
- 7. MAJ Henry S. Shields (U.S. Air Force Reserve), "Why the OMG?," <u>Military Review</u> (November 1985), p. 8.

#### PART IV

- 1. CPT Guy C. Swan, III., "Countering the Daring Thrust," <u>Military Review</u> (September 1986), p. 52.
- 2. LTC David M. Glantz, "Soviet Operational Formation for Battle: A Perspective," <u>Miltary Review</u> (February 1983), p. 11.
- 3. For more detailed studies of forward detachments, see William F. Scott and Harriet Fast Scott, "The Historical Development of Soviet Forward Detachments," <u>Military Review</u> (November 1987), pp. 26-35, and Swan, "Countering the Daring Thrust," pp. 42-53, and Chris Bellamy, "Antecedents of the Modern Soviet OMG," <u>RUSI</u> (September 1984), pp. 50-57.
- 4. Richard Armstrong, "Mobile Groups: Prologue to OMG," <u>Parameters</u> (Summer 1986), p. 59.
- 5. Bellamy, "Antecedents of the Modern Soviet OMG," p. 51.
- 6. Glantz, pp. 10-11.
- 7. Earl F. Ziemke, "The Soviet Theory of Deep Operations," <u>Parameters</u> (June 1983), p. 23.
- 8. V.K. Triandafillov, <u>Nature of the Operations of Modern Armies</u>, (Moscow-Leningrad, 1929), translated by William A. Burhans, RUSS-ENG Translations, Inc., Woodbridge, VA, 22193, Special Course reprint for the School of Advanced Military Studies, pp. 186-187.
- 9. Glantz, p. 4.
- 10. Malcolm Mackintosh, "The Development of Soviet Military Doctrine Since 1918," in <u>The Theory and Practice of War</u>, edited by Michael Howard (Bloomington, IN, 1975), p. 253.
- 11. John Ellis, Cavairy: The History of Mounted Warfare, (New York, 1978), p. 177.

- 12. Glantz, p. 3.
- 13. Bellamy, p. 50.
- 14. Norman Davies, White Eagle, Red Star, The Polish-Soviet War, 1919-1920, (New York, 1972), pp. 122-125, and Ellis, pp. 180-181.
- 15. Bellamy, p. 50.
- 16. lbid., pp. 51-57.
- 17. Steven D. Stinemetz, "Clausewitz or Khan? The Mongol Method of Military Success," <u>Parameters</u> (Spring 1984), pp. 71-80.
- 18. Ibid., p. 78.
- 19. Chris Bellamy, "Heirs of Genghis Khan: The Influence of the Tartar-Mongols on the Imperial Russian and Soviet Armies," <u>RUSI</u> (March 1983), pp. 52-55.
- 20. Ibid., p. 59.
- 21. lb1d.

#### PART V

- 1. James A. Schaefer, <u>The Tactical and Strategic Evolution of Cavalry During the American Civil War</u>, Ph. D. dissertation, (University of Toledo, 1983), p. 196.
- 2. Ziemke, p. 24.
- 3. MG J.F.C. Fuller, <u>The Conduct of War 1789-1961</u>, (Rutgers University, 1968), p. 243.
- 4. Colonel J.F.C. Fuller, "Tactics and Mechanization," <u>Infantry Journal</u>, (May 1927), pp. 190-198.
- 5. Captain B.H. Liddell-Hart, "Analysis of Cavalry Operations in the American Civil War with Special Reference to Raids on Communications," which appears as Appendix B of <u>The Military Legacy of the Civil War</u> by Jay Luvaas, (Chicago, 1959). Liddell-Hart's study was first printed in 1935. The quote here is from p. 223.
- 6. Ibid., p. 243.
- 7. Ibid., p. 244.

- 9. Schaefer, pp. 197-198.
- 10. Edward G. Longacre, Mounted Raids of the Civil War, (South Brunswick and New York, 1975), pp. 12-13.
- 11. Mary Lee Stubbs and Stanley Russel Connor, <u>Armor-Cavalry-Part I</u>, Army Lineage Series, (Washington, DC, 1969), p. 18.
- 12. Schaefer, pp. 198-200.
- 13. lbid., pp. 201-206.
- 14. lbid., pp. 207-209.
- 15. lbid., pp. 212-218.
- 16. lbid., pp. 224-227.
- 17. Ibid., p. 227.
- 18. lbid., p. 239.
- 19. LTC George T. Denison, <u>A History of Cavalry from the Earliest Times with Lessons for the Future</u>, (London, 1877), p. 386.
- 20. James P. Jones, <u>Yankee Blitzkrieg: Wilson's Raid through Alabama and Georgia</u>, (Athens, GA, 1976).

- 21. Longacre, p. 325.
- 22. Ibid., p. 12.
- 23. Schaefer, p. 244.

#### PART VI

- 1. Luvaas, p. ii.
- 2. Mackintosh, p. 252.
- 3. Luvaas, p. 66.
- 4. Ibid., p. 140.
- 5. Lieutenant General Frederick von Bernhardi, <u>Cavalry in Future Wars</u>, translated by Charles Sydney Goldman, (London, 1909), pp. 33-34.
- 6. Luvaas, p. 148.
- 7. Ibid., p. 153.
- 8. Denison, p. 537.
- 9. Luvaas, p. 111.
- 10. Richard Simpkin, Deep Battle, (Brassey's Defence Publishers, 1987).
- 11. Schaefer, p. 254.
- 12. Arthur L. Wagner, <u>The Campaign of Koeniggraetz</u>. A Study of the <u>Austro-Prussian Conflict in the Light of the American Civil War</u>, (Ft. Leavenworth, KS, 1889), School of Advanced Military Studies reprint, pp. 88-89.
- 13. Ibid., p. 90.
- 14. Jay Luvaas, "Cavalry Lessons of the Civil War," <u>Civil War Times Illustrated</u>, (January 1968), p. 27.

#### PART VII

- 1. Dick, "Soviet Operational Concepts Part I," p. 43.
- 2. Ibid., pp. 43-44.

- 3. Swan, pp. 48-50.
- 4. Ibid., p. 51.
- 5. Shields, pp. 8-9.
- 6. COL William G. Hanne, "AirLand Battle: Doctrine, not Dogma," <u>Military Review</u> (June 1983), p. 15, and LTC John S. Doerfel, "The Operational Art of the AirLand Battle," <u>Military Review</u> (May 1982), pp. 3-10.
- 7. Ibid.
- 8. LTC L.D. Holder, "Maneuver in the Deep Battle," <u>Military Review</u> (May 1982), p. 56.
- 9. Hanne, p. 16.
- 10. Swan, pp. 46-47.
- 11. COL William A. Brinkley, "The COST Across the FLOT," <u>Military Review</u> (September 1986), p. 40.
- 12. Ibid.
- 13. Ibid., pp. 40-41.

## **BIBLIOGRAPHY**

### Manuals

- Field Manual 100-5, Operations. Washington, DC: HQ Department of the Army, 1986.
- The Army Field Manual, Volume II, Part 2, Soviet Operations. London: United Kingdom Ministry of Defense, 1986.

### **Books**

- Bernhardi, Lieutenant General Frederick von. <u>Cavalry in Future Wars</u>, translated by Charles Sydney Goldman. London: John Murray, 1909.
- Brialmont, Lieutenant General. <u>Combat Tactics of Cavalry</u>, translated from the French. Ft. Leavenworth, KS: U.S. Infantry and Cavalry School, 1893.
- Cavairy School, U.S. Army. Cavairy Combat. Harrisburg, PA: Telegraph Press, 1937.
- Davies, Norman. White Eagle, Red Star The Polish-Soviet War, 1919-1920. New York: St. Martin's Press, 1972.
- Denison, Lieutenant Colonel George T. <u>A History of Cavalry from the Earliest Times with Lessons for the Future</u>. London: Macmillan and Co., 1877.
- Ellis, John. <u>Cavalry: The History of Mounted Warfare</u>. New York: G.P. Putnam's Sons, 1978.
- Fuller, Major General J.F.C. <u>Armoured Warfare</u>. Harrisburg, PA: Telegraph Press, 1943.
- <u>The Conduct of War, 1789-1961</u>. Rutgers University: Minerva Press, 1968.
- Jones, James P. <u>Yankee Blitzkrieg: Wilson's Raid through Alabama and Georgia</u>. Athens, GA: University of Georgia Press, 1976.
- Longacre, Edward G. <u>Mounted Raids of the Civil War</u>. South Brunswick and New York: A.S. Barnes and Co., 1975.
- Luvaas, Jay. The Military Legacy of the Civil War. Chicago: University of Chicago Press, 1959.

- de Saxe, Maurice. Reveries on the Art of War, translated and edited by BG Thomas R. Phillips. Harrisburg, PA: The Military Service Publishing Co., 1944.
- Schaefer, James A. <u>The Tactical and Strategic Evolution of Cavalry During the American Civil War</u>, Ph. D, dissertation. University of Toledo, 1983.
- Simpkin, Richard. <u>Deep Battle</u>. London: Brassey's Defence Publishers, 1987.
- Stubbs, Mary Lee and Stanley Russel Connor. <u>Armor-Cavairy</u>, Part I of Army Lineage Series. Washington, DC: U.S. Government Printing Office, 1969.
- Triandafillov, V.K. <u>Nature of the Operations of Modern Armies</u>. Moscow-Leningrad: 1929, translated by William A. Burhans, RUSS-ENG Translations, Inc., Woodbridge, VA.
- Wagner, Arthur. <u>The Campaign of Koeniggraetz</u>. A Study of the Austro-Prussian Conflict in the Light of the American Civil War. Ft. Leavenworth, KS: The Cavalry School, 1889.

# **Articles**

- Bolt, COL William J. and COL David Jablonsky. "Tactics and the Operational Level of War." Military Review (February 1987): pp. 2-19.

- Brinkley, COL William A. "The COST Across the FLOT." <u>Military Review</u> (September 1986): pp. 30-41.
- Devries, LTC Paul T. "Maneuver and the Operational Level of War." <u>Military Review</u> (February 1983): pp. 13-34.
- Dick, Charles J. "Soviet Operational Concepts Part I." <u>Military Review</u> (September 1985): pp. 29-45.
- \_\_\_\_\_. "Soviet Operational Concepts Part II." <u>Military Review</u> (October 1985): pp. 4-19.
- \_\_\_\_\_ "Soviet Operational Maneuver Groups A Closer Look." International Defense Review (No. 6, 1983): pp. 769-776.
- Doerfel, LTC John S. "The Operational Art of the AirLand Battle." <u>Military Review</u> (May 1982): pp. 3-10.
- Donnelly, C.N. "The Soviet OMG: A New Challenge for NATO." <u>Military Review</u> (March 1983): pp. 43-60 and <u>International Defense Review</u> (No. 4, 1982): pp. 1177-86.
- Fuller, J.F.C. "Tactics and Mechanization." <u>Infantry Journal</u> (May 1927): pp.190–209.
- Glantz, LTC David M. "Soviet Operational Formation for Battle: A Perspective." <u>Military Review</u> (February 1983): pp. 2-12.
- Hanne, COL William G. Hanne. "AirLand Battle: Doctrine, not Dogma." Military Review (June 1983): pp. 11-25.
- Holder, LTC L.D. "A New Day for Operational Art." Army (March 1985): pp.22-32.
- pp. 54-61. "Maneuver in the Deep Battle." <u>Military Review</u> (May 1982):
- Luttwak, Edward N. "The Operational Level of War." <u>International Security</u> (Winter 1980-81): pp. 61-79.
- Luvaas, Jay. "Cavalry Lessons of the Civil War." <u>Civil War Times Illustrated</u> (January 1968): pp. 20-31.
- . "European Military Thought and Doctrine," in <u>The Theory and Practice</u> of War, edited by Michael Howard. New York: Frederick A. Praeger, 1966.

- Mackintosh, Malcolm. "The Development of Soviet Military Doctrine Since 1918," in The Theory and Practice of War, edited by Michael Howard. New York: Frederick A. Praeger, 1966.
- Meehan, John F., III. "The Operational Trilogy." Parameters (Autumn 1986) pp.9-18.
- Scott, William F. and Harriet Fast Scott. "The Historical Development of Soviet Forward Detachments." <u>Military Review</u> (November 1987): pp. 26-35.
- Shields, MAJ Henry S. "Why the OMG?" Military Review (November 1985): pp. 4-13.
- Stinemetz, Steven D. "Clausewitz or Khan? The Mongol Method of Military Success." Parameters (Spring 1984): pp. 71-80.
- Swan, CPT Guy C., III. "Countering the Daring Thrust." <u>Military Review</u> (September 1986): pp. 42-53.

- White, COL Thomas E. and MAJ John D. Rosenberger. "The Armored Cavalry Regiment: Catalyst for Operational Success." <u>Armor</u> (March-April 1986): pp. 11-15.
- Ziemke, Earl F. "The Soviet Theory of Deep Operations." <u>Parameters</u> (June 1983): pp. 23-33.